

REMARKS

Claims 1-13 are pending in the application. Claims 1-7 have been withdrawn from consideration as being directed to a non-elected invention. In the Office Action of January 12, 2006, the Examiner rejected claims 8-13 under 35 U.S.C. §103(a) as being allegedly unpatentable over *Gibbons et al. '609* in view of *Park*. Applicants respectfully traverse the rejection and address the Examiner's disposition below.

Applicants' independent claim 8, as amended, claims a liquid crystal display device comprising a pair of transparent substrates being aligned via a predetermined distance therebetween with at least one of them having thereon a film for liquid crystal orientation. A liquid crystal layer is in the distance between the substrates. The film is a UV-reactive film, and is exposed to first polarized UV rays while the film is on the substrate aligned parallel to a reference plane, and next to second polarized UV rays after the substrate is rotated on the reference plane. The device has a contrast ratio greater or equal to 138 effected by the exposure to the first polarized UV rays and the second polarized UV rays. The device has a pre-tilt angle greater than or equal to 3.5° effected by the exposure to the first polarized UV rays and the second polarized UV rays. The ratio of the exposure energy during the first polarized UV rays exposure to that of the second polarized UV rays exposure is 5:1.

Therefore, as claimed in claim 8, the substrate is rotated on the reference plane between UV ray exposures. As described in the specification, the first polarized UV ray exposure is used to control the intended liquid crystal orientation, then the substrate is rotated on the reference plane, and then the second polarized UV ray exposure is used to control the pre-tilt angle of the liquid crystal. (Specification, page 3, lines 12-23). Applicants' device, as claimed in claim 8, has beneficial characteristics from the substrate being rotated between UV ray exposures. Specifically, a stable pre-tilt angle is present in the liquid crystal and a contrast ratio greater than or equal to 138 is achieved. Further, a pre-tilt angle greater than or equal to 3.5° is also achieved. If, for example, the substrate is not rotated on the reference plane, and instead the radiation source is moved on an elevation angle relative to the reference plane, then the pre-tilt angle in the liquid crystal would not be as stable as in Applicants' claimed device and a lower contrast ratio would be achieved.

This is clearly unlike *Gibbons '609* in view of *Park*, which fails to disclose or suggest a ratio of exposure energy during a first polarized UV rays exposure to that of a second polarized UV rays exposure of 5:1. As stated by the Examiner, *Gibbons '609* teaches a ratio of 4:1. (See, *Gibbons '609* 12:25; Office Action of 1/12/2006, page 5). *Gibbons '609* fails to suggest any other

ratio than 4:1. Therefore, *Gibbons '609* fails to disclose or suggest Applicants' claimed ratio of 5:1.

Park fails to discuss a ratio of exposure energy during a first polarized UV rays exposure to that of a second polarized UV rays exposure. Therefore, *Gibbons '609* in view of *Park* still fails to disclose or suggest Applicants' claimed invention.

Claims 9-11 and 13 depend directly or indirectly from claim 8 and are therefore allowable for at least the same reasons that claim 8 is allowable.

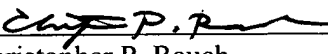
Claim 12 has been canceled.

Applicants respectfully submit that the rejection has been overcome and request that it be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that claims 8-11 and 13 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,

 (Reg. No. 45,034)
Christopher P. Rauch
SONNENSCHN, NATH & ROSENTHAL LLP
P.O. Box #061080
Wacker Drive Station - Sears Tower
Chicago, IL 60606-1080
Telephone 312/876-2606
Customer #26263
Attorneys for Applicant(s)